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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/046,626	01/14/2002	Anna Pelagotti	NL010022	4805

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BRIARCLIFF MANOR, NY 10510

EXAMINER

WONG, ALLEN C

ART UNIT PAPER NUMBER

2613

DATE MAILED: 11/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/046,626

Applicant(s)

PELAGOTTI ET AL.

Examiner

Allen Wong

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,4,6 and 7 is/are rejected.
- 7) ☒ Claim(s) 2,3 and 5 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>1/14/02, 6/11/02</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 4, 6 and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Nakajima (5,412,435).

Regarding claims 1 and 6, Nakajima discloses a device and method of motion-compensated interpolation of a data-signal, which data-signal comprises successive images wherein each image comprises groups of pixels, the method comprising:

generating motion vectors, each motion vector corresponding to a group of pixels of one image, between a group of pixels of said one image and a second group of pixels of another image in the data-signal (fig.20, note the motion vectors $V_1 \dots V_n$ are the generated motion vectors);

generating interpolated results as a function of these motion vectors (fig.20, note motion vectors $V_1 \dots V_n$ are then inputted to element 43 outputs the best interpolated results, along with the results from element 41 and 42 that incorporates the weights $E_1 \dots E_n$ into element 43);

estimating the reliability of each motion vector corresponding to a particular group of pixels (fig.20, note $3_1 \dots 3_n$ are the estimators for estimating reliability of the particular group of pixels);

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calculating weights as a function of the reliability of the motion vectors (fig.20, note the $E_1 \dots E_n$ are the weights that represent the reliability of the motion vectors); and

generating an interpolated luminous intensity of a group of pixels for an interpolated image by calculating, on the basis of these weights, a weighted average of the interpolated results (fig.20, element 41 and 42 obtains the weights $E_1 \dots E_n$ from elements $3_1 \dots 3_n$ and process these weights $E_1 \dots E_n$ to generate an interpolated results that would apply to element 43 for selection and output of the best interpolated results for the generation of interpolated luminous intensity of a group of pixels for an interpolated image).

Regarding claim 4, Nakajima discloses wherein the generation of interpolated luminous intensities according to the invention is only performed in those parts of the images of the data-signal where edges in the motion vector field of the images are located (fig.20, element 41 and 42 obtains the weights $E_1 \dots E_n$ from elements $3_1 \dots 3_n$ and process these weights $E_1 \dots E_n$ to generate an interpolated results that would apply to element 43 for selection and output of the best interpolated results for the generation of interpolated luminous intensity of a group of pixels for an interpolated image).

Regarding claim 7, Nakajima discloses a picture signal display apparatus, comprising:

means for receiving a data-signal, which data-signal comprises successive images wherein each image comprises groups of pixels (fig.20, note input data 10 and

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reference data 11 are the received data signals of the successive images, wherein image data comprises groups of pixels);

a device for motion-compensated interpolation of said data-signal, as claimed in claim 6 (fig.1, element 79);

means for generating at least one interpolated image on the basis of said interpolated luminous intensities (fig.20, element 41 and 42 obtains the weights $E1 \dots E_n$ from elements $31 \dots 3n$ and process these weights $E1 \dots E_n$ to generate an interpolated results that would apply to element 43 for selection and output of the best interpolated results for the generation of interpolated luminous intensity of a group of pixels for an interpolated image); and

means for displaying the at least one interpolated image (fig.20, note output of element 43 goes to a display for displaying at least one interpolated image).

Allowable Subject Matter

3. Claims 2, 3 and 5 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

4. The following is a statement of reasons for the indication of allowable subject matter: The prior art does not disclose the specific limitations of claim 2 because of the level of details. Also, the prior art does not disclose the specifics of claim 5.


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Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Allen Wong whose telephone number is (703) 306-5978. The examiner can normally be reached on Mondays to Thursdays from 8am-6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Kelley can be reached on (703) 305-4856. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Allen Wong
Examiner
Art Unit 2613

AW
11/10/04